

2
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ACTGTCTGGAACTGGACTGAGTCACCAAAAGCGAATGGCTTCATCTTATAAAATGTCTGAACAAAGCACA
ACTTCTGAGCACATTACAGAACATGTGATCACCTGATCCTGACTAACCGTTCTGGATTAGAGACAGA
CTCAGTAGCAGAGGAAATGAAGCAGACTGTGGAGGGACAGGGGCATACAGTCAGCTGGCAGCTCTCTGA
TACTCGCGGTGATAATACCCACCATGGTGGGAACATCCTGTGATCTGGCTGGCACTGGAGAAAAGG
CTGCAGTACGCTACCAACTACTTTTAATGTCCTGGCGATAGCAGATTGCTGGTGGATTGTTGTGAT
GCCGATTGCCCTCTTGACAATCATGTTGAGGCTATATGGCCCCCTCCCACTGGCCCTGTGCTGCCTGGT
TATTCCCTCGATGTTCTCTTCAACTGCCTCCATCATGCATCTCTGTGCCATTCCCTGGACCGCTATATA
GCCATCAAAAAGCCAATTCAAGGCCAATCAGTGCACACCCGGGCTACTGCATTCAAGATTACAGTGGT
ATGGTTAATTCATAGGCATGCCATCCCAGTCCCTATTAAGGAATCAGAGACTGATGTTAATCCAC
ACAATGTCACCTGTGAGCTGACAAAGGACCGTTGGAGTTATGGTCTTGACTGGCTGCTTTC
TTCGTACCTCTCACCATCATGGTAGTCACTTACTTCTACCATTACACTTACAGAAGAAAGCTTACTT
GGTCAAAATAAGGCCACCTCAACGCCAACACGGTGGACTGTGCCACAGTTTCTAAGGAAGACTCAT
CCTTTCTACACCAGAAAAGGTGCAATGCTGGATGGGCTCACAGGGATAAAATTCTACCTAACTCAAGT
GATGAGACACTTATGCAAGAATGTCCTCAGTTGGAAAAGATCAGGCCAACCATTTCTAATGAGCAGAG
AGCCTCGAAGGCCCTGGAGTCGTTTCTTTCTGCTTATGTTGCCCCCTTTTATTACAAATC
TAACCTTAGCTCTGTGATTCTGCAATCAGACCACTCTCAAAACACTCCTGGAGATATTGTTGTTGATA
GGCTACGTTCTCGGGGGTAATCCTCTGATCTACACTCTCAATAAGACATTTCGGGAAGCATTG
CAGGTACATCACCTGCAATTACCGAGGCCACAAAGTCAGTAAAGCACTTAGGAAGTTTCCAGTACACTT
GTTTGGAAATTCAATGGTAGAAAACCTAAATTTCACAAAACATGGAATTGAAATGGGATCAACCCT
GCCATGTACCAGAGCCAATGAGGCTCCGATGTTCAACCATTCACTCATCAATCATCCTCCTCGATAC
CCTCTCACTGAAAAGATGGCGACAAAGCGAAGAGCAGGTCACTACATATTGCAAGGAACGGGCC
TCATCTTGAGAGAGGGTGTGAGCAGGACGCACCGTCAAGAGTGA (SEQ ID NO:1)

MASSYKMSEQSTTSEHILQKTCDFHLILTNRSLETDSVAEEMKQTVEGQGHTVWAALLLAVIIPТИGGN
ILVILAVALEKRLQYATNYFLMSLAIADLLVGLFVMPIALLTIMFEATWPLPLALCPAWLFLDVLFSTASI
MHLCAISLDRYIAIKKPIQANQCNRTRAFIKITVVWLISIGIAIPVPIKGIEVDVINPHNVTCELTDRF
GSFMVFGSLAAFFVPLTIMVVTYFLTIHTLQKKAYLVKNKPQRTRWTPTVFLREDSSFSSPEKVAMLD
GSHRDKILPNSSDETLMRMSSVGKRSQAQTISNEQRASKALGVVFFLFLLMWCFFFITNLTLACDSCNQT
TLKTLLEIFVWIGYVSSGVNPLIYTLFNKTREAFGRYITCNYRATKSVKALRKFSSTLCFGNSMVENSKF
FTKHGIRNGINPAMYQSPMRLRCSTIQSSSIILDTLLTENDGDKAEEQVSYILQERAGLILREGDEQDAR
APWQVQE (SEQ ID NO:2)

FIGURE 1

Underlined = deleted in targeting construct

Bold = sequence flanking Neo insert in targeting construct

**ACTGTCTGGAACTGGACTGAGTCACCAAAAGGCGAATGGCTTCATCTTATAAAATGTCTG
ACAAAGCACAACTTCTGAGCACATTACAGAAGACATGTGATCACTGATCCTGACT
ACCGTTCTGATTAGAGACAGACTCAGTAGCAGAGGAATGAAGCAGACTGTGGAGGGAC
AGGGGCATACAGTGCACTGGGCAGCTCCCTGATAACTCGCGGTGATAATACCCACCATTG
GTGGGAACATCCTTGTGATTCTGGCTTGCACTGGAGAAAAGGCTGCAGTACGGCTACCA
ACTACTTTTAATGCTT **GGCGATAGCAGATTGCTGGTTGGATTGTTGTGATGCCGA**
TTGCCCTCTGACAATCATGTTGAGGCTTATATGGCCCCTCCACTGCCCTGTGCTCTG
CCTGGTTATCCTCGATGTTCTTTCAACTGCCCTCATGCATCTGTGCCATT
CCCTGGACCGCTATATAGCCATAAAAAGCCAATTAGGCAATCAGTGCAACACCCGGG
CTACTGCATTCATCAAGATTACAGTGGTATGGTAATTCAATAGGCATGCCATCCAG
TCCCTATTAAGGAATCGAGACTGATGTGATTAATCACACTGTCACCTGTGAGCTGA
CAAAGGGCCGCTTGGCAGTTTATGGCTTGGTCACTGGCTGCTTCTTGTACCTC
TCACCATCATGGTAGTCACTTACTTCTCACCAACTTACAGAAGAAAGCTTACT
TGGTCAAAAATAAGCCACCTCAACGCCAACACGGTGGACTGTGCCACAGTTCTAA
GGGAAGACTCATCCTTTCATCACCAGAAAAGGTGGCAATGCTGGATGGGCTCACAGGG
ATAAAATTCTACCTAACTCAGTGTGAGACACTTATGCGAAGAATGTCCTCAGTTGGAA
AAAGATCAGCCCAAACCAATTCTAATGAGCAGAGAGCCTGCAAGGCCCTGGAGTCGTG
TTTCCCTTTCTGCTTATGGTGGCCCTTTTATTACAATCTAACATTAGCTCTGT
GTGATTCCCTGCAATCAGGACTCTCAAAAACACTCTGGAGATATTGTGAGCTAGGCT
ACGTTCCCTGGGGTGAATCCTGATCTATACACTCTCAATAAGACATTGGGAAG
CATTGGCAGGTACATCACCTGCAATTACCGAGCCACAAAGTCAGTAAAGCACTTAGGA
AGTTTCCAGTACACTTGTGGAAATTCAATGGTAGAAAACTCTAAATTTCACAA
AACATGGAATTGAAATGGATCAACCCCTGCCATGTACCAAGAGGCCAATGAGGCTCCGAT
GTTCAACCATTCAGTCAGTCTCATCAATCATCCTCTGATACCCCTCTCAGTGA
GCGACAAAGCGGAAGAGCAGGTCAGCTACATATTGCAGGAACGGGCCCTCATCTTGA
GAGAGGGTGATGAGCAGGACGCACCGCACCAGGGCAGGTTCAAGAGTGA**

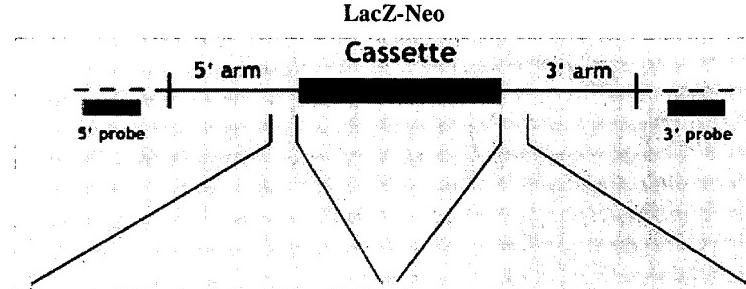
FIGURE 2A

| | | | |
|--|--------|-------------------------|--------|
| Gene Sequence Structure * | 130 bp | Sequence Deleted | 319 bp |
| Size of full-length cDNA: 1550 bp | | | |

Targeting Vector* (genomic sequence)

Construct Number: 2520

Arm Length:
5': 1.6 kb
3': 5 kb



— Targeting Vector
- - - Endogenous Locus

* Not drawn to scale

| | |
|---|--|
| 5' > TGAGTGTCTGGTGGGTTGCTAAATGCTTGCTAAAGCAGATGAC TTGCTTAGCTACTGACCAGCTGCTGA CCACTGTCTGGAACATGGACTGAGT CACCAAAAGGCAGATGGCTTCATC TTATAAAAATGTCTGAACAAAGCAC AACTCTGAGCACATTACAGAA GACATGTGATCACCTGATCCTGAC TAACCGTTCTG<3' (SEQ ID NO:3) | 5' > GGCGATAGCAGATTGCTGGTTGGATTGTTGTGATGCCATTGCC CCTCTTGACATCATGTTGGTGA GTATTTCCCTGTTCTGCCACT GAACACTACTAACGTAGTGAATG GACACTCACTGACCTTATTTGT TTGAAATAAAGAAGGACCTGGATTAAAAACACAGAAGGGAACATTCC TTCAATTTCAT<3' (SEQ ID NO:4) |
|---|--|

FIGURE 2B